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ABSTRACT

To examine the relationship among the Principles of Adult Learning Scale (PALS), Educational Orientation Questionnaire (EOQ), and Philosophy of Adult Education Inventory (PAEI), the three instruments were administered to 111 graduate adult education students. The instruments had similar purposes: PAEI measured philosophical orientation relative to adult education practice; PALS examined philosophy by examining congruence with teacher-centered or collaborative teaching styles; and EOQ explored the theoretical constructs of Knowles, in which pedagogy is contrasted with andragogy. The study also explored the philosophical leanings of the target population. The overall sample was predominantly Progressive on the PAEI and scored very close to the reported means for both the PALS and EOQ. Analysis of variance was used to compare groups within each of the demographic variables of age, gender, and occupational position across all scores on all three instruments. Only gender and age had significant differences on any scores. Correlations between demographic variables and all instrument scores and correlations among the three instruments' scores were examined using Pearson r. The significant, though moderate, correlation between the PALS and EOQ seemed to confirm that the two instruments were measuring similar constructs. (Appendixes include 2 data tables.) (Contains 56 references.) (YLB)

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A Quantitative Examination of Philosophical Predilections of Adult Education Graduate Students

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Abstract

In an effort to examine the relationship among the Principles of Adult Learning Scale (PALS), Educational Orientation Questionnaire (EOQ), and Philosophy of Adult Education Inventory (PAEI), these three instruments were administered to 111 graduate adult education students. These instruments have similar purposes and measure philosophical orientation (PAEI), congruence with teacher-centered or collaborative teaching styles (PALS), and congruence with andragogical or pedagogical orientation (EOQ). Additionally, the present study sought to explore the philosophical leanings of this group of adult educators. The overall sample was predominantly Progressive on the PAEI and scored very close to the reported means for both the PALS and EOQ. ANOVA was used to compare groups within each of the demographic variables of age, gender, and occupational position across all scores on all three instruments. Correlations between demographic variables and all instrument scores, as well as correlations among the three instruments' scores themselves, were examined using Pearson r.

Philosophy and Adult Educators: An Inquiry into the Philosophy-Practice Link Using the PALS, EOQ, and PAEI

Philosophy has traditionally been subdivided into five categories: metaphysics, aesthetics, logic, epistemology, and ethics. Perhaps because adult educators have tended to be a pragmatic lot, focusing on questions of application, they have often eschewed philosophical questions. Robert Blakely gently rebuked the field in 1957: "We can--and usually do--refrain from asking philosophical questions, but we cannot avoid acting according to philosophical assumptions" (quoted in Quigley, 1991, p. 111). Nevertheless, philosophical questions relating to adult education have been and are being raised, usually in the areas of ethics and epistemology. Merriam (1984) devotes a book to philosophy and adult education as presented in the writings of several authors, most identifying themselves as adult educators. Other important contributors to the discussion include Apps (1973), Bergevin (1967), Blakely (1967), Elias and Merriam (1980), Kallen (1962), Lawson (1975), and McKenzie (1978), all of whom contributed books to the subject.

Theoretical Framework

Compared to these expository treatments of philosophy, quantitative examinations of philosophy in adult education have been uncommon until the last decade or so. Three instruments in particular have encouraged quantitative

investigations. Zinn's (1983b) Philosophy of Adult Education Inventory (PAEI) explicitly examines philosophical orientation relative to adult education practice. Zinn's instrument is derivative of Apps' (1973) Toward a Working Philosophy of Adult Education and particularly the theoretical philosophical positions of adult educators analyzed by Elias and Merriam (1980). The specific positions they identified and discussed are Liberal, Progressive, Behaviorist, Humanistic, Radical, and Analytic, each of which has its own theoretical heritage. Elias and Merriam (1980) pose the question "What stance should the adult educator adopt as his or her personal philosophy of adult education?" (p. 203). They propose three possible approaches to addressing the question: choose one of the six philosophies, formulate an eclectic philosophy, or choose one particular theoretical position and develop an educational philosophy based upon it. Zinn's instrument deals with five of the philosophies and attempts to provide adult educators the opportunity to clarify their personal philosophy by measuring their degree of congruence with each of the five positions.

Conti's (1978; 1982) Principles of Adult Learning Scale (PALS) implicitly examines philosophy by examining one's congruence with adult learning "principles." Conti himself notes the connection between practice and philosophy: "Because teaching style is comprehensive and is the overt implementation of the teacher's beliefs about teaching, it is directly linked to the teacher's educational philosophy" (1990, p. 81). Conti (1982) notes the

widespread use of teacher-centered methods throughout most types of education, methods which he connects to the ideas of B. F. Skinner. Opposing this teacher-centered approach is the learner-centered "teaching style" for adult education which Conti endorses. This approach is derived from Lindeman's application of Dewey's Progressivism to adult learners, focusing largely on the learner's experiences. Conti sees the collaborative, learner-centered mode continued in the writings of Kidd, as well as Bergevin and Knowles, who see the adult learner as a full partner in the learning experience.

In the EOQ, Hadley explicitly explores the theoretical constructs of Malcolm Knowles, in which a teacher-centered philosophy, pedagogy, is contrasted with a learner-centered philosophy, andragogy. Andragogy is based upon four major assumptions about the characteristics of adult learners (Knowles 1973): (1) As individuals mature their self-concept moves from that of a dependent personality toward that of a self-directed human being; (2) Adults accumulate a growing reservoir of experience which is a rich resource for learning; (3) Adults' readiness to learn is closely related to the developmental tasks of their social roles; and (4) With maturity, there is a change in time perspective, from one of future application of knowledge to immediacy of application, therefore adults' orientation toward learning becomes more problem-centered rather than subject-centered. Knowles' concept of andragogy falls in the Dewey-Lindeman lineage. Hadley borrows the pedagogy-andragogy theoretical framework from his mentor

Knowles and constructs an instrument which attempts to assess adult educators' positions on the continuum from pedagogy to andragogy.

The behaviors and practices reflected in all three instruments are indicative of the philosophy-practice linkage (however unarticulated one's personal philosophical position might be) suggested by Blakely's (1957) assertion that ". . . we cannot avoid acting according to philosophical assumptions" (quoted in Quigley, 1991, p. 111). All three instruments have been used independently or in conjunction with a number of other instruments in previously conducted studies. Yet in spite of the clear theoretical linkage between philosophical orientation toward adult education on the one hand and andragogical-pedagogical and collaborative-noncollaborative approaches toward teaching adults on the other, the relationships among these three instruments have not been examined in any prior studies.

Literature Review

While a search of the literature revealed no journal publications which utilized the EOQ, the instrument has been used in at least 22 doctoral dissertations over the past decade. A number of these studies found significant relationships between educational orientation (andragogical or pedagogical) and other teacher characteristics. For example, Jones (1982) found university faculty educational orientation related to home department or field; Hopkins (1981) identified nurse educators as more pedagogical than other adult educators;

McLawhorn (1987) cited significant differences in the educational orientation of vocational-technical teachers when grouped by sex, academic level, and area of instruction; and similarly, Dickerson (1981) found occupational/technical instructors more pedagogical, with their educational orientation related to age, sex, and academic level. Other dissertations used the EOQ in conjunction with a variety of other instruments to investigate characteristics of educators in diverse fields. Studies looked at educational orientation of full- and part-time community college faculty (Sutton, 1989), ministers of education (Evans, 1986), county extension agents (Patterson, 1984), ABE teachers (O'Gorman, 1981), and elementary education teachers (Headlee, 1990).

A second group of dissertations using the EOQ explored the relationship of faculty educational orientation to various student outcomes. In one study, educational orientation of arts/sciences instructors had no effect on student satisfaction in continuing education offerings (Hynes, 1990). Congruence between student and teacher educational orientations was related to student persistence in business or proprietary school (Capaz, 1990); however, congruence was not related to student evaluations of inservice training (Logue, 1982). Research using the EOQ also examined the educational orientations of community college students and faculty (Ligas, 1986; Stickney-Taylor, 1989), graduate theology students and faculty (Grubbs, 1981), students in a Christian doctrine course (Peterson, 1980), returning students in nontraditional degree programs

(Sappington, 1987), and university supervisors and interns (Ramos, 1987).

Possibly measuring the same construct as the EOQ, the PALS was devised to measure adult educator teaching style, those distinct teacher qualities which are constant across content, audiences, and settings (Conti, 1990). Scores on the PALS may identify the teacher as one who uses a collaborative or learner-centered approach (similar to an andragogical orientation on the EOQ) or one who uses a teacher-centered approach (similar to a pedagogical orientation on the EOQ). As in the case of the EOQ, the body of research utilizing the PALS includes a preponderance of dissertations and a few journal articles.

Several studies have linked teaching style, as measured by the PALS, to student performance. In 1984, Conti, author of the PALS, investigated the relationship of teaching style to academic achievement in an adult basic education program and found the teacher-centered approach more effective with students studying for their high school equivalency exam, while the learner-centered approach was more effective with the English-as-a-second-language classes. In contrast, Jones (1984) found no significant relationship between teaching style and the academic gains of secondary migrant students in reading, mathematics, and English. Continuing to relate teaching style to student performance, Conti and Welborn (1986) studied allied health professionals enrolled in college courses for continuing education and reported that teaching style was an important variable affecting student performance. This study also revealed that either style could be

effective when used to the proper degree in a certain setting. Also in 1986, Wiley found that teaching style influenced the level of moral development in prison inmates. A final look at the relationship of teaching style to student performance was conducted by Conti and Fellenz in 1988. While the learner-centered approach was generally effective with students in the tribally controlled community colleges of Indian reservations in Montana, student achievement was highest when teachers were strongly committed to a definitive teaching style, regardless of whether it was teacher-centered or learner-centered.

The PALS has also been used to explore the relationship of teaching style to other characteristics of adult educators. Training and development professionals who were Theory Y-oriented and who had more formal education (Pearson, 1980) and those who were employed by large organizations and had many years of teaching experience (Franklin, 1988) were more collaborative; hospital-based educators and Cooperative Extension educators who had training in adult education tended toward the collaborative mode (Douglass, 1982); and social work field instructors adhered to the collaborative teaching mode (Clancy (1986). In contrast, the non-collaborative teaching style was most prevalent with health education professors (Freeland, 1988), associate degree nursing instructors (McKenzie, 1987), adult basic educators (Dinges, 1981), part-time teachers of credit-free courses at a community college (Scotney, 1986), and part-time teachers at an adult education co-op (Conti, 1983).

The PAEI, a 75-item Likert-scaled instrument which is self-administered and self-scored, is designed to assist the adult educator to begin a process of philosophical inquiry and reflection (Zinn, 1990). The PAEI has been used in one journal article and in several dissertations since its creation in 1983. Progressivism was noted to be the predominant philosophy of adult educators who were from business and technical schools, colleges and universities, health care agencies, and business and industry (Gago, 1985); continuing educators (Carson, 1985); and occupational therapy educators (Barrett, 1988). McKenzie (1985) found significant differences in the philosophical orientations among adult educators who represented business and industry, religious education, and adult education graduate study. His findings "suggested that the philosophical orientations of the adult educators in the study are rooted in professional practice and derive more from concrete experiences in organizational settings than from logical analysis or the evaluation of abstract philosophical arguments" (p. 19).

Despite some similarities in the purposes of the instruments, no previous study has attempted to examine the relationship among the PAEI, the PALS, and the EOQ. Nor has any study attempted to study any adult education population using any combination of the instruments; the present study attempts to do so.

Problem Statement

Are there relationships among the PAEI, PALS, and EOQ; and what do these instruments reveal about the philosophical predilections of adult education

graduate students?

Method

Subjects

Subjects were 111 graduate students enrolled in a course titled Principles of Adult Education, which was offered over 3 years in several sections. In this course an examination of adult education philosophy was a central concern. The sample was comprised of 34 males and 77 females; 22 were 30 years old or under, 45 were 31-40, 34 were 41-50, and 10 were over 50. For data analysis purposes, the 10 who were over 50 were collapsed with the 41-50 group, creating a single group of 44 who were over 40 years old. Occupationally, the sample was composed of three general categories: nurses, instructors, and other. There were 30 nurses (including nurse educators, administrators, and clinicians); 30 instructors of various subjects and settings (this group included 10 public school teachers who in most cases were making career changes or were involved in part-time adult education instruction); and 51 "other," representing such fields as administration, counseling, the military, and business and industry.

Procedures and Instruments

Well into each offering of the course, but prior to the discussion of philosophy, three instruments--the Principles of Adult Learning Scale (PALS), the Philosophy of Adult Education Inventory (PAEI), and the Educational Orientation Questionnaire (EOQ)--were administered to the subjects. Subjects

scored the instruments themselves with aid available from the instructor. Demographic information on age, gender, and occupation was collected along with the scores on the instruments. Subjects were also encouraged to offer narrative comments about the instruments themselves. The PALS provides a cumulative score (with a range of 0-220 and a normed mean of 146) and scores on each of seven factors, including Learner-Centered Activities, Personalizing Instruction, Relating to Experience, Assessing Student Needs, Climate Building, Participation in the Learning Process, and Flexibility for Personal Development. Using the test-retest method, the PALS had a reliability coefficient of .92 after a seven day interval (Conti, 1982). Conti reports that construct validity was established by two separate juries of adult educators, and that content validity was established by field tests with adult basic education practitioners, conducted in two phases. Further,

> criterion related validity was established by comparing the scores on the PALS of those who scored two standard deviations either above or below the mean in the Phase 2 field-testing to their scores on the Flanders Interaction Analysis Categories (FIAC). The FIAC was selected as the external criterion becaue it is a validated system for measuring initiating and responsive classroom actions and because the actions described in Flanders' definition of initiating are highly congruent with the characteristics of the collaborative mode. To link these instruments, the

> national jury members were asked to judge the action in each item as either initiating or responsive. The scores derived from actual observations were used to evaluate PALS' concurrent validity and to assess the degree to which accepting a mode and practicing it are congruent (Conti, 1982, p. 140).

The EOQ yields a score falling between -3.00 (highly pedagogical or teacher-centered) and +3.00 (highly andragogical or student-centered), with a standardized score of 0 being the theoretical mean. Hadley (1975) reports test-retest reliability of .89 and coefficient alpha of .94. He judged content validity to be "satisfactory," and

> Predictive validity of the instrument based on total scores was satisfactory with coefficients ranging from .24 to .49. However, predictive validity coefficients based on summary scores of items grouped by multiple regression ranged from .50 to .60 (p. 7595A).

The PAEI, based on Elias and Merriam's (1980) typology of adult education philosophies, does not offer a cumulative score, but rather individual scores (ranging from 15-105) on each of five adult education philosophical orientations: Liberal (intellectual development), Behaviorist (behavioral change), Progressive (practical, problem-solving skills), Humanistic (personal growth, self-actualization), and Radical (education for major social change). According to Zinn (1983b), "a score of 95-105 indicates a strong agreement with a given

philosophy; a score of 15-25 indicates a strong disagreement. . . between 55 and 65, it probably means that you neither agree nor disagree strongly with a particular philosophy" (p. 8). Zinn (1983a) judges the PAEI

> to have a fairly high degree of validity, based on jury mean scores of >.50 (on a 7 point scale) on 93% of the response options, and commonality coefficients of >.50 on 87% of the response options. Reliability coefficients of >.40 on 87% of the response options and alpha coefficients ranging from .75 to .86 on the five scales were considered measures of moderate to high reliability (p. 1667A - 1668A).

Because the instruments were administered prior to any discussion of philosophy, it was assumed that possible philosophical biases of the three different instructors who taught the course would be minimized. Data were analyzed using one-way ANOVA and Pearson r correlations, with .01 being used as the level of significance.

Results

Table 1 reflects the frequency distribution of the demographic groupings in the sample as well as the mean scores on the instruments for the total sample and according to gender, age, and occupational position. On the PAEI there was a tendency toward agreement with all five of the philosophical orientations (Liberal, Behaviorist, Progressive, Humanist, and Radical) with Liberal having the lowest mean (68.6) and Progressive having the highest (84.2). Not a single subject scored

in what Zinn categorizes as the "s "strongly disagree" (15-25) range, and only 23 subjects (21%) scored in the "strorongly agree" (95-105) range on any of the five orientations. In fact, 88 subjects (s (79%) had no score fall within either of the "strongly disagree" or "strongly agngree" ranges.

The mean EOQ score for tr the total sample was -0.2, compared to Hadley's mean of zero, indicating neither a· a strong pedagogical nor andragogical orientation. This suggests that the he sample has no more pedagogical-andragogical orientation than would be expecte:ted due to chance. Similarly, the overall scores on the PALS revealed a mean of of 143.0 compared to Conti's mean of 146.0, once again indicating a very consistent lt pattern for this group compared to the norming group.

Table 1 also shows results o s of analyses of variance (ANOVA's) comparing groups within each of the demogra graphic variables across all scores on all three instruments. Of the demographic ic variables of age, position, and gender, only gender and age had significant diff ifferences on any scores. On the Progressive scale of the PAEI, females scored d significantly higher (86.0) than males (80.2). Similarly, on the Humanist scale, fe , females scored significantly higher (83.5) than males (76.4). Also, on the Humani anist scale, there was a significant difference among the age groups. Subsequen ent analysis using Tukey's HSD revealed this finding was dominated by the signif nificant difference between the under 30 and over 40 age groups.

Insert Table 1 about here

Table 2 displays the intercorrelations among all possible pairs of variables with 44 significant correlations using a .01 level of significance. Since three of the variables involved categorical information, those were transformed to dichotomous vectors for correlation with continuous scores from the instruments, as suggested by Pedhazur (1982). There were some positive correlations between instrument scores and the demographic variables of age and gender, but no correlations between instrument scores and occupational position. Although not significantly so at $p < .01$, older members of the sample tended to be more Humanist as measured by the PAEI and have higher (more collaborative) scores on the PALS. Females tended to be more Progressive and Humanist than males. The magnitude of these significant relationships, however, was not very great. The sample showed no significant relationships between occupational position (nurses, teachers, and "other") and any score on any of the three instruments. The only significant correlations which showed a high magnitude were those among several of the factors within the PALS as well as the Liberal-Behaviorist orientations on the PAEI ($p < .01$; $r = .70$). Nevertheless, there were a number of significant relationships of low to moderate magnitude. Between the PAEI and the PALS there were 11 significant correlations. The Humanist scale correlated positively with the PALS total score ($p < .01$; $r = .36$) as well as with Personalizing

Instruction (factor 2) and Participation in the Learning Process (factor 6). In contrast, the Liberal and Behaviorist orientations had significant though somewhat weak negative correlations with the PALS ($p < .01$; $r = -.25$ and $-.27$, respectively). Those who were less Liberal and less Behaviorist tended to score higher on being Learner Centered (factor 1) and Flexibility for Personal Development (factor 7).

Insert Table 2 about here

Similarly, those subjects with a more andragogical orientation as measured by the EOQ tended to be less Liberal and Behaviorist ($p < .01$; $r = -.51$ and $-.42$, respectively), and more Humanist ($p < .01$; $r = .39$). The EOQ positively correlated with the PALS ($p < .01$; $r = .51$) and four PALS sub-scores: Learner Centered (factor 1), Personalizing Instruction (factor 2), Participation in the Learning Process (factor 6) and Flexibility for Personal Development (factor 7). Somewhat curiously, three PALS factors (Relating to Experience, Assessing Student Needs, and Climate Building) did not show a positive or negative relationship with any of the PAEI orientations or with the EOQ. Perhaps equally interesting, the Progressive and Radical orientations of the PAEI had no relationships with the EOQ or any factors of the PALS.

Discussion

No previous research has examined possible correlations among any of the

three instruments, and there are relatively few published studies other than dissertations using just one. Moreover there is very little explicitly quantitative work examining philosophy of adult education. This study began with the premise that through an examination of practice, all three instruments were also examining the philosophical assumptions upon which that practice is based, whether overtly in the case of the PAEI or implicitly in the cases of the PALS and the EOQ.

The significant, though moderate ($p < .01$; $r = .51$), correlation between the PALS and the EOQ does seem to confirm that the two instruments are measuring similar constructs; congruence with Conti's "principles of adult learning" suggests Hadley's andragogical orientation, while a lack of congruence with adult learning principles suggests a more pedagogical orientation. The similarity is imperfect, however, at least as measured by this sample, since three of the seven factors comprising the PALS (factor 3, Relating to Experience; factor 4, Assessing Student Needs; and factor 5, Climate Building) did not significantly correlate with the EOQ. The PALS' negative correlation with the Behaviorist and Liberal philosophies of the PAEI and positive correlation with the Humanist philosophy reflect the apparent collision of the behaviorist and liberal traditions with extolled values in many adult learning situations and, obversely, the apparent convergence of adult learning principles with humanism. Following exactly the same pattern, the EOQ also had significant negative correlations with the PAEI's Behaviorist and Liberal philosophies and a positive correlation with the Humanist philosophy.

The Behaviorist position may seem to some adult educators to be manipulative and incompatible with learner-focused goals, and the Liberal philosophy represents the traditions of liberal education, where the teacher is often viewed as an imparter of knowledge valued for its own sake as well as for cultural continuity. Neither orientation places the individual's learning goals at the center of attention. The prominence of the teacher's role in both the Behaviorist and Liberal philosophies (excluding self-directed liberal education) may explain the negative correlations between those philosophies and both the PALS and the EOQ.

Taking the sample as a whole, one might have expected some negative correlations among the five scales of the PAEI (Liberal, Behaviorist, Progressive, Humanist, and Radical), on the assumption that some of the scales might tend to be mutually exclusive. This did not occur. The means for all five scales ranged from a moderately high 68.6 (Liberal) to 84.2 (Progressive), implying no significant conflict between, for example, humanism and behaviorism. In fact, three positive relationships (Liberal-Behaviorist, Progressive-Humanist, and Radical-Humanist) were rather strong, suggesting overlap in the categories. These were exactly the same "combinations" Zinn (1990, p. 53) cited as "typical." Zinn recommends that "if you find your scores fairly equal among all of the philosophies, or spread among three or more, you may need to work on clarifying your beliefs and looking for contradictions among them" (p. 53). Nevertheless,

the fact that 79% of the present sample of 111 subjects showed neither "strong agreement" nor "strong disagreement" with any of the five positions, coupled with the absence of any negative correlations among the five orientations, raises a question about whether the instrument measures what it is intended to measure. Whether this lack of mutual exclusivity is an anomaly of the sample, a flaw in the instrument or its nomenclature, or in fact there is no mutual exclusivity among any of these five orientations is unclear.

Although age and congruence with adult learning principles as measured by the PALS were not significantly related at the strict standard of .01, they are well beyond significance at .05. Conti (1983) and Dinges (1981) also found this positive relationship with age, but Scotney's (1986) sample showed a negative relationship. On the other hand, Franklin (1988) and Pearson (1980) found no relationship at all. At least in this sample, perhaps younger subjects tended to be closer in time and experience to the traditional methodologies of college teaching. Obversely, the older subjects, being somewhat more experienced and possibly more mature, may have more empathy with adult students and have adopted attitudes that they would like to see applied to themselves. Such speculation should be examined critically, however. Similarly, the significant difference between females and males on the Humanistic and Progressive scales of the PAEI, with females scoring higher, may tend to confirm popular images of female instructors as more caring. But the absence of other significant gender differences

on the other three scales of the PAEI and the other two instruments may suggest more similarities than differences.

For those subjects who offered optional comments about the instruments, two general trends emerged. Several of the subjects noted that their responses to all three instruments were situationally dependent. One observed that "I teach according to situation and the level of education of the learners." Another observed that "I'm flexible and would change my teaching/facilitating to address the situation." Another said the instruments "need a 'depends' column." Referring to the PALS, Conti (1985) specifically addresses this issue of "situational specificity" (p. 8): "These findings switch the general argument from a combative stance of which style is best to a more practical position of when is each style most appropriate" (p. 8). This statement is more in keeping with our subjects' view of the importance of situation than Conti's later (1990) statement that "Teaching style refers to the distinct qualities displayed by a teacher that are persistent from situation to situation regardless of the content" (p. 80-81). A second, smaller cluster of comments tended to indicate broad, general agreement with the accuracy of the scores: "I concur with the results in my case"; "this is true about me"; I believe the scores reflect the true me." However, since most subjects did not offer comments at all, their generalizability should be examined cautiously.

Conclusion

One's educational philosophy, whether articulated or not, manifests itself in the methodologies that an instructor utilizes. An instructor's perceptions about the differences or similarities of adult learners vis a vis adolescent and younger students, for example, will be reflected in how andragogical or pedagogical that instructor chooses to be. But such perceptions are only one component in one's educational philosophy. Equally important is the instructor's view of the nature of the instructional content--highly specialized, concrete skills may encourage a pedagogical approach whereas areas implying intellectual exploration and self-growth may call for andragogical approaches. A third component may include a host of situational factors: time requirements, class size, voluntarism of the students, certification or licensure requirements, and other institutional constraints. A fourth, and critical, component is the instructor's own experience as a learner. A final component is the instructor's perception of the complexities of human nature--a Theory Y or Theory X orientation, in McGregor's (1960) terminology.

Even if they served no other purpose, the three instruments used in this study can prompt more thinking about one's adult education philosophy and affirm the philosophy-to-practice nexus. They can encourage adult educators to engage in the rigorous intellectual task of articulating their own adult education philosophy, i.e., establishing a coherent rationale for their practice. A critical

examination of philosophy, which can begin through the questions on these instruments, should have the salutary effect of confirming sound practice or amending questionable practice. On the other hand, to the extent that adult educators operate within a philosophical vacuum, their practice is not so much a reasoned, thoughtful commitment to a set of educational values as it is an uncritical adherence to habit.

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Table 1

Means and ANOVA's on all Measures According to Demographic Characteristics

		PALS Factors							EOQ[a]	PAEI Factors[b]				
Characteristic	N	PALS	1	2	3	4	5	6	7		LIB	BEH	PROG	HUM	RAD
Conti's Norms		146.0	38.0	31.0	21.0	14.0	16.0	13.0	13.0						
Total Sample	111	143.0	37.8	27.1	21.7	14.5	16.0	12.8	13.2	-.2	68.6	73.9	84.2	81.3	72
Gender															
Males	34	135.7	35.8	24.8	21.7	14.4	15.9	11.9	12.3	-.4	69.0	72.3	80.2	76.4	68.6
Females	77	146.3	38.7	28.1	21.7	14.5	16.0	13.2	13.6	-.1	68.5	74.6	86.0	83.5	73.4
ANOVA F's		4.0	2.5	5.4	0.0	0.1	0.0	3.7	3.2	2.6	0.1	1.0	7.2*	8.8*	4.2
Age															
<30	22	130.2	35.4	24.0	20.7	13.0	15.5	11.8	11.8	-.5	71.2	74.2	82.5	77.5	69.5
31-40 45	142.6	36.6	27.2	21.7	14.5	16.0	12.6	13.1	-.3	68.3	73.5	81.8	79.2	72.2	
>40	44	150.0	40.1	28.4	22.2	15.1	16.2	13.4	14.0	0	67.7	74.2	87.5	85.5	73.0
ANOVA F's		4.5	2.7	2.9	0.7	2.5	0.5	1.7	2.6	1.8	0.6	0.1	3.7	4.9*	0.7
Position															
Nurses 30	137.9	37.2	25.0	19.9	14.1	15.8	12.1	13.4	-.2	70.8	75.5	84.5	81.7	72.5	
Teachers	30	140.5	35.7	27.2	21.9	14.0	15.9	12.3	12.2	-.2	66.9	73.1	86.4	81.2	70.8
Others 51	147.7	39.3	28.2	22.6	15.0	16.2	13.5	13.7	-.2	68.4	73.5	82.7	81.2	72.4	
ANOVA F's		1.6	1.7	2.0	3.0	0.9	0.2	1.9	1.5	0.1	0.8	0.4	1.2	0.0	0.2

* P <.01; df = 2,107 for age and positions, 1,108 for gender.
F = 4.82 for age and position; 6.87 required for gender.

NOTE:

a. Standard scores (0 = Mean, 1.0 = standard deviation) for EOQ
b. Strong agreement = 95-105; Neutral = 55-65; Strong disagreement = 15-25 for PAEI

Table 2

Intercorrelations Among All Variables

NUM	VARIABLE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Age		-07	18	-12	-03	24	29*	11	28	23	22	10	20	08	16	22	-03
2	Gender			15	-02	10	25*	27*	19	19	15	22	00	02	01	18	17	-19
3	EOQ				-51*	-42*	10	39*	05	51*	42*	50*	15	24	18	35*	53*	-04
4	Liberal					70*	16	16	24	-25*	-39*	-18	-04	-04	05	-06	-46*	-12
5	Behaviorist						28*	-05	28*	-27*	-31*	-18	-01	-08	-05	-12	-34*	-11
6	Progressive							57*	45*	18	15	20	13	05	09	19	04	-15
7	Humanist								58*	36*	26*	37*	21	18	08	38*	37*	-02
8	Radical									09	-21	11	24	18	06	16	15	06
9	PALS										63*	86*	69*	66*	67*	76*	60*	16
10	FAC1-Learner Centered											43*	10	05	22	38*	48*	18
11	FAC2-Personalizing Instruction												62*	62*	51*	72*	46*	18
12	FAC3-Relating Experience													70*	63*	53*	22	22
13	FAC4-Assessing Student Needs														51*	60*	22	11
14	FAC5-Climate Building															50*	15	04
15	FAC6-Participation in Learning Process																40*	18
16	FAC7-Flexibility for Personal Development																	16
17	Occupational Position																	

Note. For significance on age and occupational position, .29 required.
For all other variables, .24 required.

* Significant at .01 Level